DOCUMENT RESUME

ED 194 456 SP 016 700

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TITLE Clinical Research Center Proposal. Aerobics/Nutrition/Wellness Institute.
PUB DATE 80
NOTE 33p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Behavior Modification; *Disease Control; Habit Formation; *Health Education; Life Style; Nutrition; Physical Activities; *Physical Fitness; Postsecondary Education; Preventive Medicine; *Program Development; Relaxation Training; *Self Care Skills; Stress Variables

ABSTRACT

There is growing belief in the wellness concept by health educators, governmental agencies, corporations, and the general public. They believe preventive medicine not only improves the health of our population but also could be the only way our health care system can survive and deliver adequate care to the acutely ill. With few minor exceptions little has been done to change current health practices. The Aerobics/Nutrition/Wellness Institute (ANWI) is developing a program for individuals, groups, and organizations desiring a high level of wellness through self-regulated activities. The primary activities include aerobic fitness, use of the U.S. Dietary Goals, and stress management using behavior modification technology. The program will provide education and will make a major effort to improve the community fitness, diet, and health where ANWI facilities exist. A major part of the clinical research center activity of the institute will be to develop a program to analyze and validate the health promotion and disease prevention program of the ANWI. (JD)

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CLINICAL RESEARCH CENTER PROPOSAL

AEROBICS/NUTRITION/WELLNESS INSTITUTE

West Springfield, Massachusetts

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CLINICAL RESEARCH CENTER PROPOSAL

AEROBICS/NUTRITION/WELLNESS INSTITUTE

West Springfield, Massachusetts

The goal of the Aerobics/Nutrition/Wellness Institute (ANWI) at West Springfield is to develop a program for individuals, groups, and organizations desiring a high level of wellness through self-regulated activities. The primary activities will include:

1) Aerobic Fitness
2) Use of the U.S. Dietary Goals
3) Stress Management Using Behavior Modification Technology

The strategy for achieving the goal of the ANW Institute is continuing to evolve. The program will not only provide education but it will make a major effort to improve the community fitness, diet and health where ANWI facilities exist. A major part of the clinical research center activity will be to develop a program to analyze and validate the health promotion and disease prevention program of this institute. The approach to validation includes:

1) Cost effectiveness
2) Sustained improvement in individual self
3) Procurement of valid and reliable data in aerobic fitness, diet compliance, and stress control for analysis

4) Develop the proper "power" variables (primarily biometric data) to reflect the achievement of the program

5) Provide for confidentiality and freedom of choice to all individuals while sustaining a positive self-regulated health focus.

6) Develop a flexible data collection and analysis program that will allow eventual modifications and more indepth analysis. For example, the CRC and related ANWI facilities will provide programs in occupational health and safety and programs in self-regulated, individually motivated health promotion both at the work site and in private life setting.

Background

Over 99% of individuals who are born healthy suffer premature death and disability as a result of poor individual health (i.e. lifestyle) practices, and to a lesser degree they suffer due to poor environmental conditions. Fortunately, there has been an ever increasing interest in health promotion in the last few years; however, the bad news is that a vast majority of the population contribute little of their time or education efforts in activities directed toward health promotion.

The average American 45 year old man could easily achieve 11 years of life expectancy through positive health practices. Said a different way by achieving improved health status, he could reach the current health status of the average 34 year old.

As shown in Appendix A, the 10 leading causes of death among the total population are ranked by the number of years of life lost before the age of 65 based on U.S. Health Statistics of 1975. It is estimated that 53 percent of these illnesses are caused by poor lifestyles, whereas only 17 percent are due to failure of human biology at the time of onset of illness, 10 percent due to failure of the health care system, and 22 percent due to the environment. Approximately 4.4 million life years are lost as a result of lifestyles.

Our culture supports negative health practices. It provides constant temptation to the individual to indulge in poor health practices. Prevention of disease means forsaking bad habits which most people enjoy only as a result of cultural influences--overeating, underexercising, too much drinking, smoking cigarettes, and driving too fast.

There has been insufficient focus of positive health practices. While research indicates that people can improve the quality and length of their lives by

PROPORTIONAL ALLOCATION OF THE CONTRIBUTING FACTORS OF PREMATURE MORTALITY TO THE FOUR ELEMENTS OF THE HEALTH FIELD

Ten Leading Causes of Death Among the Total Population 1+ Years of Age Ranked by Number of Years of Life Lost Before Age 65, U.S.A. 1975

Ten Leading Causes of Death	Years of Life 65 Lost	%	Health System	Life Style	Environment	Human Biology
Cancer	1,802,820	17.5	10	37	24	29
Heart Disease	1,769,180	17.2	12	54	9	28
Motor Vehicle Accidents	1,424,823	13.8	12	69	18	0.6
All Other Accidents	1,166,793	11.3	14	51	31	4
Homicide	621,846	6.0	0	66	41	5
Suicide	583,751	5.7	3	60	35	2
Cerebrovascular Disease	352,524	3.4	7	50	22	21
Cirrhosis of Liver	320,457	3.1	3	70	9	18
Influenza & Pneumonia	206,673	2.0	18	23	20	39
Diabetes	118,119	1.1	6	26	0	68
			9.8	53.1	21.7	16.8

Source: Center for Disease Control, Atlanta

engaging in positive health practices, only limited progress has been made in these areas. The promotion of exercise, the cessation of smoking, rejection of alcohol abuse, the promotion of automobile safety, compliance with U.S. Dietary Goals and stress management could all add considerably to the improvement of our nation's health.

This is the mission of the Aerobic/Nutrition and Wellness Clinical Research Center.

Cost of Punitive Medicine

A. The average family spends approximately $2,000. per year on curative medicine. In 1966 the life expectancy was 70.1 years and over the past 15 years has only increased 3 years while the cost of health care has increased by several fold in that 15 year period.

Little advances in disease prevention has occurred since the improvement of the safety of water, milk supplies, personal and food hygiene, effective methods of sewerage disposal, schematically decreased the incidence of infectious disease. In addition, vaccinations for small pox, diptheria, pertussis, tetanus, polio, measles and tuberculosis further reduced our mortality. Medical science and research has provided important but less significant

contributions such as heart lung bypass, transplantation, discovery of insulin, discovery of antibiotics and improved surgical techniques. However, the cost of "illness care" has skyrocketed. The cost of illness, disease, and accidents in our nation has reached 161 billion in 1977 approaching 10% of the gross national product and costs are increasing at 15% per year. Less than 2-2.5% of the national health expenditures is spent on disease prevention and control measurements. Only 0.5% is spent for health education and improvement in the delivery system.

Recent analysis of the national ambulatory medical care survey reveal that physicians spend an average of 13-18 minutes with patients, only 12-18% of that time was used to provide instruction or education regarding the health problems of the individual. Primarily, health education is necessary in the treatment of hypertension, diabetes, neurosis, arthritis and obesity. Treatment designed to produce a mental or emotional response to suggestion, persuasion, re-education, reassurance, or support including psychological counselling is of primary importance in problems dealing with neurosis and obesity. Twenty percent of all visits to primary care physicians involves problems (e.g. hypertension, diabetes, neurosis, arthritis, joint aches, and obesity) that could benefit from education and self help activity. The failure at education regarding

health promotion and disease prevention represents a rapidly escalating cost. Increased use of laboratory tests to as many as 73% of visits and X-ray tests in 53% of visits are the primary source of these increased costs.

It is not difficult to argue that the most important cost containment is to promote attitudes and habits of wellness thus allowing a reduction in comprehensive or diagnostic test and evaluations. New research is required to develop techniques which will get the compliance of patients to procedures of self-help, self-regulation, and adherence with health promotion activities and proper use of medications where indicated. The major first step will be to improve the patient's insight about risk factors and behavior affecting health. Physicians will need to take a more intensive effort in instruction and advice to patients. A major priority is the need to develop a variety of health educators, lay leaders, peer educators, and facilities to promote wellness using aerobic fitness, dietary goals, and stress management. Psychotherapy and therapeutic listening for the treatment of minor mental illnesses is key since 14-22% of patient's visits to physicians carry a major diagnosis of neurosis.

Need for Aerobics, Nutrition, and Wellness Institute

There is growing belief in the wellness concept by health educators, governmental agencies, corporations, and the general public. They believe preventive medicine not only improves the health of our population but also could be the only way our health care system can survive and deliver adequate care for the acutely ill. In short, no one can afford to be sick.

Even with this growing conviction, prevention is discussed more than it is practiced. People decry our current health practices but with few minor exceptions little has been done to change that. A notable accomplishment in this area is the President's Council on Physical Fitness. This Council has influenced a number of firms (perhaps 300) to improve employee health through aerobic fitness programs. The primary development is recreation facilities open not only to the employee but to his family, this has been well received.

However, a general consensus exists that these programs must be more focused and better developed to sustain the interest and compliance of the individuals. The peak epidemic in heart disease (1968) has declined through better understanding of heart disease, earlier and more compliance with treatment of hypertension, more exercise,

better diet, better weight control. Still 20-30% of the population has undetected hypertension and we still are among the leading countries with regard to cardiovascular illness.

Compliance with proper aerobic principles can reduce the incidence of heart disease between 1/3 and 1/2 (Appendix B). Controversy exists regarding the relative and attributable risk of heart disease. Work of Paffenbarger of the Stanford University School of Medicine and his analysis of male Harvard alumni in a 6-10 year followup study identified the major prevalence to heart disease is:

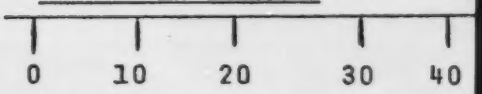
1) Sedentary lifestyle (61%)
2) Cigarette smoking (52%)
3) Hypertension (9%)
4) Obesity (37%)
5) Parenteral heart attack (genetic) (39%)

While the attributable risk is greatest for hypertension, risk of heart attack is 134% higher than normal tensive men. Hypertension seems to be the most potent of the risk factors in a clinical sense. However, because of the high prevalence of sedentary lifestyle (61%), the potentcy (attributable risk) of 33% sedentary lifestyle would appear to be the most serious risk factor in the community. Certainly, the most dramatic observation was a 50% reduction in the risk of heart attack in individuals who,

APPENDIX B

RESULTS OF REGULAR EXERCISING

CATEGORY	1st TEST	2nd TEST	IMPROVEMENT
Cardiovascular Conditioning * (Kiloponds)	2.2	2.9	32%
Resting Heart Rate (Beats Per Mintue)	73.3	66.4	9%
Body Fat (Pounds)	38.8	35.4	9%
Flexibility (Inches)	11.8	14.4	22%
Muscular Strength And Endurance**			23%



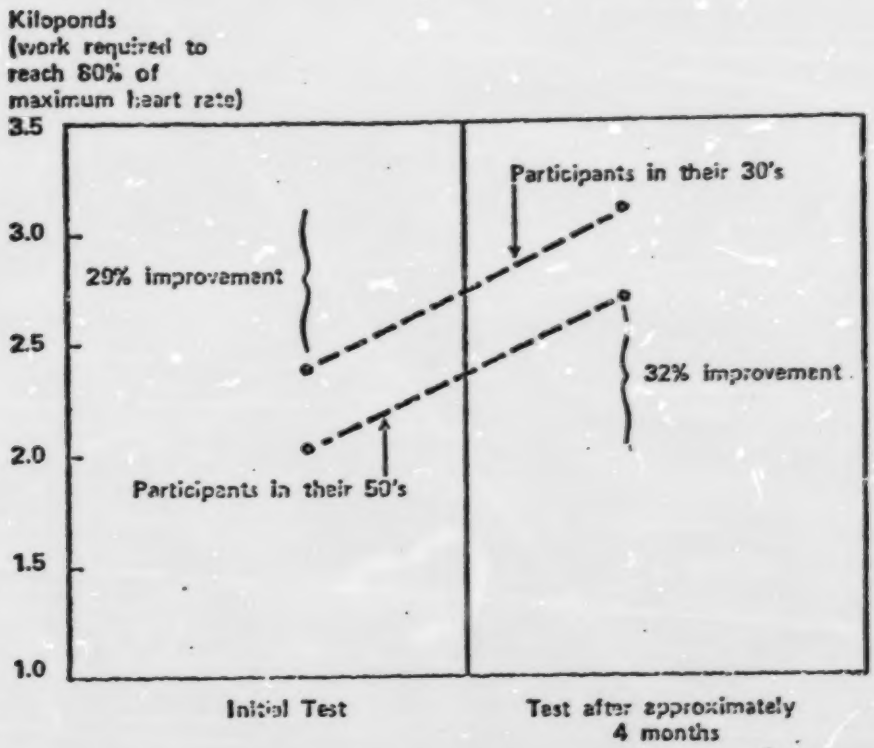
* Resistance level required to achieve 80% of maximum heart rate. Because of a change in procedure, sample size (with comparable tests) for this measurement was 31 and average period between tests was four months.

** Compilation of three separate measurements.

The decrease in resting heart rate and increase in cardiovascular conditioning indicate that the heart is both more efficient and considerably stronger.

As indicated in the exhibit below, the overall improvement in cardiovascular conditioning is about 30% for participants in their thirties, and also for those in their fifties. More importantly, the fifty year olds demonstrated, in their second test, cardiovascular efficiency superior to the thirty year old group when they entered the program.

IMPROVED CARDIAC EFFICIENCY/REDUCED CARDIOVASCULAR AGE



Source: Total Fitness Systems, California

through running, walking, interval running, stair climbing and sports, burned some 2000 calories each week.

A systematic approach of these factors can be developed by a risk analysis program that provides biometric measurement of:

1) Hypertension (blood pressure)
2) Cigarette smoking (by a blood test)
3) The measurement of lipid profile including high density lipoprotein cholesterol.

Effective measurements of aerobic fitness through stationary bicycle exercise tests also provide important indices to measure risk as well as motivate the individual to increased exercise levels using a progressive exercise program and serial stress test monitoring.

Clearly, prospective studies are needed to identify the relative benefit of various health promotion efforts but few would deny that a program emphasizing aerobic fitness, weight control, and compliance with dietary goals and stress management, together with medical treatment of hypertension and an end-smoking program will be of enormous benefits. Rather than identify Type A personalities and try to alter this personality which is not thought to be possible, a program can provide appropriate education and lifestyle for the Type A individual. The results would be to offset any health risks associated with this

personality, particularly development of coronary heart disease, by use of biofeedback and other behavior, diet and exercise treatments.

Improved knowledge regarding the proper role and methods of athletic activities should reduce the number of individuals who overexercise and therefore jeopardize their health during a health promotion program. A comprehensive multidisciplinary program which emphasizes diet nutrition, and stress management received a high priority among individuals, the community corporations and government as it does with the ANW Institute. Nutrition/Metabolism support labs of the clinical research center have already worked out effective measuring devices through use of pulse rate, blood pressure, oxygen uptake, weight monitoring, fat mass estimates and serum lipid profiles.

Philosophy of Approach to Health Promotion

Many of the present motivational efforts focus on death and fear of death which in many cases have little impact. Concentration on human interaction and positive health potential will be required if the competitive American is to make a significant commitment. The major problem in this area is the inability to sustain the individuals participation in the health promotion program. Many individuals start off with good

intentions and end up returning to their prior negative health practices. This has been true for smoking cessation programs, weight control programs, and fitness programs where dropout rates approach 50-70%. Sustained results will require a new focus and a new, innovative program to be effective and cost efficient.

The community we live and work in will certainly influence the results. Other negative health practices that affect the results are altered social behavior such as poor family communication, poor spouse relations, parent-child relations, eating habits, other family activities. Without understanding, education, practice and commitment there is little tolerance or encouragement for change. The norms that control our everyday living must be identified, characterized, and changed where they are not consistent with health promotion and disease prevention.

Opportunities

The public's increased interest and desire for improved health couple and with the need to reduce health care costs provide a timely and unique opportunity for exploitation of the research materials and methods of the ANW Institute. Encouraging statistics come from the reduced death rate from heart disease (approximately 190,000 deaths less

in 1977 than the peak of 1968). The ANW program will encourage both behavior and cultural changes. The program is comprehensive and will be based on sustained efforts. Individuals, their family, and their companies will be encouraged to reward this health promotion. Certainly, the health insurance industry should respond more vigorously than the current records demonstrate. A health status analysis reported by the State Mutual Life Insurance Company in a report to the Society of Actuaries; "We conclude that these differences are real, (improved health by better lifestyle), they emerge at early duration; contrary to what may earlier have been believed, they are not deferred to over the ages; they are statistically significant at any reasonable level; and <u>they are too large to be ignored for individual insurance underwriters and pricing purposes."</u> Some 40 life insurance companies offer lower rates for non-smokers, 10 reward non-smokers at standard build, and 3 reward regular exercisers. <u>However, no health insurance companies have provided any incentives or disincentives in insurance</u> for lifestyle modifications. This would be possible given the fact that reliable biometric, objective measurements could be taken such as blood pressure and cholesterol, carbon monoxide determinations; yet no effort has yet occurred from the health insurance industry.

Until these economic incentives are utilized, it will be difficult to change the approach of the society and the community to health promotion. The best results for smoke ending have been associated with simple bonuses and the same observations have been made in weight control. However, individual and community pride clearly are quite powerful in affecting these changes. Opportunities certainly exist for health insurance companies to pioneer such plans. They certainly could benefit from the clinical research center plan of the ANW Institute.

Objectives

Philosophically, our approach to the ANW program is routed in existentialism, i.e., people control their own density. Thus, it is up to the individual to identify his/her problems and choose the appropriate courses of action.

This philosophical approach translates into an unconditional positive regard for the individual's ability to solve and act in his/her best interests. To effectively aid in the individual's effort, we have relied on self-help techniques in the use of peer educators. The skill required in these resource people include:

1) A working knowledge of aerobic exercise, nutrition, and weight control, behavior therapy techniques of

assertiveness training, and the relaxation response.

2) The teaching techniques important to the peer educator include knowing the characteristics of a helping relationship and the communication skills which enhance this relationship.

3) It is important to be aware of the limitations of peer education, particularly where it involves health issues, such as the consequence of smoking, alcoholism, drug abuse, sexual problems (venereal disease, rape, etc.) and family problems (marital and child abuse).

4) Peer educators must be constantly reminded of their limitations but they must have a positive approach in defining the process of their effort at supportive, non threatening interactions while complimenting existing professional programs.

5) Certainly, a key trait to being a good peer educator is to be a sympathetic listener who can respond effectively using the above mentioned knowledge.

6) Furthermore, more peer educators must have the ability to establish the necessary trust and rapport for meaningful discussions concerning the individual's responsiveness for his/her own decision making and the consequences of present behavior.

7) Any questions as to the role of peer education must be addressed by the professional staff. Considering the ignorance regarding health and lifestyle promotion, there can be no doubt that peer education programs and related support mechanisms and facilities must transmit adequate and safe cognitive information.

8) The methodology used in the ANW program emphasizes the individual's responsibility in monitoring his/her own health by the observance of simple, prudent rules of behavior related to sleep, exercise, diet, weight control, smoking, alcohol, and drug abuse.

Our position is that the individual's power to make responsible decisions concerning health and lifestyle is greatly hindered by the lack of knowledge. In the previous background we have emphasized the importance of education and behavior change. Changes in human behavior involve a sustained and repetitive intelligence message. They are reinforced through peer pressure and approval and have clearly perceived awards (including economic rewards) which will materialize in as short a period as possible.

Evaluation of the ANW Program

Regardless of the factors responsible in affecting health and lifestyle changes, testing and statistical analysis are required. Epidemiological experimental

design will use both cross sectional and longitudinal analysis. The longitudinal research design will be the most important in the ANW program as was the Framingham study in cardiovascular disease.

This analysis includes:

1) Discovering relationships between knowledge, attitudes and practices in the participants who:

a) fully comply

b) partially comply

c) drop out

2) Perception of the consumers opinion of the program and its ability to help by course content and personnel.

3) The peer educator's personal opinion of the program and his/her resulting interaction.

Finally, the objective biometric and health (physical and mental disease) measurements must be related to other independent parameters as well as economic considerations (work attendance, productivity, and cost).

ANW Education Program

Multidisciplinary activity in clinical research of aerobics, nutrition, and wellness has elucidated many underlying metabolic responses that can be developed in improved health promotion programs. The logical extension

LIVE FOR LIFE
Lifestyle Profile

NAME: _____

COMPANY: _____

INDICATORS FOR HEALTH

	VERY HIGH	ACCEPTABLE	REQUIRES IMPROVEMENT	REQUIRES CHANGE	RECOMMEND MEDICAL REVIEW	RECOMMENDED LIFESTYLE CHANGE (Self-Directed)
BIOMETRIC DATA						
Ideal Weight (Above or Below)	Ideal	0-10%	10-20%	20-30%	Over 30%	
Body Fat %	10-15%	15-20%	20-25%	25-30%	Over 30%	
Systolic Blood Pressure	110 or less	110-130	130-150	150-180	180 & up	
Diastolic Blood Pressure	80 or less	80-90	90-95	95-100	100 & up	
Total Cholesterol	less than 170	170-185	185-220	220-250	250 & over	
Total Chol./HDL Chol.	less than 3.0	3.0-4.0	4.0-5.0	5.0-10.0	10.0 & over	
Triglyceride	less than 100	100-200	200-300	300-500	500 & over	
Exercise Fitness	900-600 KPM		600-300 KPM		300 or less	
MEDICAL HISTORY						
Parents: Cardiovascular Disease(CVD) Under Age 60	None	One CVD	Two CVD	One Death	Two Deaths	
Self and/or Parent Illness	None	Occasional	Mild	Moderate	Severe	
HEALTH PRACTICES						
Cigarette Smoking	Never	Quit 2 Yr.	0-10/day	½-2 pk./day	2+ pk./day	
Exercise	60 min. every other day	30 min. every other day	irregular exercise	little + sedentary	no exercise + sedentary	
Diet	Follow U.S. Dietary Goals	Follow Prudent Diet	Skip Meals	Snacks + Skip Meals	High Fat, Meat Sugar, Salt Diet	
Stress	Well Organized Relaxed Self Worth		Tired Depressed Sad		Irritable, Anxious Tremor/Tic Insomnia	
Alcohol	Less than 2 Drinks per day	2 Drinks per day	Greater than 3 Drinks in less than 2 hours	Ritual Drinking	Purposeful Loneliness Dependence	
Shoulder Strap/Seat Belt	100%	75%	50%	25%	Never	
Miles Driven Per Year	Under 10,000	10,000-15,000	15,000-20,000	Over 20,000		
Physical Exam including Pap Test, Breast & Rectal Exam	Regular		Recent		None	
QUALITY OF LIFE						
Satisfaction with Self and Others	Excellent	Mostly	Some	Very Little	Poor	

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of basic and applied research is the dissemination of the knowledge to others involved in health promotion and disease prevention programs. The ANW Clinical Research Center has conducted such educational activities with multi level health care personnel emphasizing the state-of-the-art knowledge and the transfer of sound research findings into patient care practices. Programs are tailored to the individual and groups which can include physicians, nurses, dietitians, pharmacists, psychologists, exercise physiologists, and a variety of health promotion and paraprofessional individuals.

The educational activities include two major categories:

1) INTERNAL

A major educational commitment within the facility is to teach the fundamentals of wellness that involve aerobic exercise, U.S. Dietary Goals, and stress management. In this broad category, special emphasis is on the response to the individual to make changes that are physiologically sound and metabolically beneficial in avoiding lifestyle illnesses. Major commitment is the training of peer professionals in a variety of disciplines previously mentioned. Besides the application of treatment techniques, the fundamentals on which they are based are top priority.

Other educational activities include providing educational materials, learning opportunities, and demonstrations to physicians within the community, carried out on a formal and an informal basis. Organized lectures are provided by the staff. Consulting services involve information exchanges concerning the role and the delivery of a wellness program. This same type of activity is extended to physicians and other interested professional personnel who travel to our facilities for an exchange of ideas and learning.

Sabbatical leave and intense one-month programs are also available to interested parties. Inservice activities to sustain the competence of our own staff is a daily function of the education program of the institute, along with close interaction between the various professionals and their staffs. A continued program of evaluation of performance and upgrading of activities is carried out on a regular basis.

EXTERNAL

Course

A highly visible multilevel approach to external education activities include the formal courses organized and sponsored by the research service. Formats of these courses offer a variety of objectives involving aerobic

exercise, dietary goals for health promotion, weight control, and stress management. The annual program emphasizes the state-of-the-art review regarding developments in these individual fields. The goal also serves to invite a distinguished visiting facility to supplement the staff's expertise within an educational framework that involves lectures, workshops, and tutorial sessions. The staff also has extensive cooperation with various organizations to participate in symposiums and workshops around the country and are acutely aware of the need for this unique expertise. Formal lectures and presentations have been made by all the members of the staff on an individual basis. The number and the variety of invited lectureships reflect our commitment to continuing education. These peer level activities also reflect an awareness of the concern of various groups and the importance of wellness programs and the credibility provided by having a sound scientifically defensible basis for these programs. It should be further emphasized that these multidisciplinary multilevel programs bring together various specialists for learning what each group can do. This has been a unique contribution of this research facility.

Certainly, considerable support to continue and expand this present activity of education is required. The establishment of ANW's programs will strengthen the environment and improve the education of the health promotion providers and consumers. The public will greatly benefit by the development of sound, scientifically defensible research and education programs which will gain both technical and social consensus. The goal is to better focus our efforts regarding exercise, diet, and stress management for an improved lifestyle.

Summary

The Aerobics, Nutrition, and Wellness Institute has the potential to be one of the nobelist experiments in the history of mankind. In a recent appraisal of the health care system of the United States, the major emphasis has been placed on its fractional, pluralistic character. A successful experiment in producing an effective and efficient health-preserving quality of life is urgently needed.

Disease care costs are rapidly becoming impossible to incorporate into our economic capacity. Improving health to avoid disease is becoming an increasingly important goal, particularly for the portion of the population that has stable housing requirements, food requirements, and education requirements.

Who's Responsible

Few would doubt that the individual has the power - indeed the moral responsibility to monitor his own health by the observance of simple, prudent rules of behavior relating to sleep, exercise, diet, weight control, alcohol, and smoking. However, the individuals responsibilities for one's own health is greatly hindered by the lack of knowledge. This deficiency begins with inadequate formal education in these areas and is exacerbated by competition from the powerful forces of advertising. The results of this are sloth, gluttony, alcohol intemperance, reckless driving, sexual abuse and smoking. The social scientist has been indicted by those who say, "he who hates sin, hates humanity; after all, life is meant to be enjoyed." Unfortunately, the individual's responsibility for health has been sacrificed by the situation in which personal desires come in conflict with the individual's responsibility to society at large. However, the cost of irresponsibility in the area of health and lifestyle has now become prohibitive. The responsibility now rests with all of society and is beyond the individual. Individual freedoms, when in conflict with good health practices, become another man's shackles, including higher taxes, higher insurance premiums, and impairment of the economic stability of the society.

Strategy

The strategy for obtaining the goals of better health and lifestyle must incorporate personal health habits along with social changes in the home, neighborhood and work environment. This, in turn, involves health screening and incentives from health insurance providers. Stimulating the public, business, religious, and social efforts at restraining the advertising of non-healthful products and developing positive sanctions for disseminating health information through mass media are essential goals.

Health practice education must include the prevention of disease by providing a sustained and repeated intelligent message that reinforces through peer pressure and approval clearly perceived rewards for exercising, dieting, and stress management in as short a period of time as possible.

Education leading to rehabilitation from morbidity of diseases is a key goal of the ANW program. Better diet control for the obese and the diabetic patients, as well as the patients with heart disease and cancer, and better techniques of stress management will impact the incidence of depression, smoking, and drinking. Exercise can be seen as a key motivator to self-esteem and self-confidence complimenting behavior change programs for weight control, smoking, drinking, etc.

Increased rewards for individual effort and for maintaining the effort will be part of the program. Personal rewards must be provided for participating in screening and risk analysis test, compliance with health promotion and daily activity. No one can minimize the complexities of these efforts. Development of a lifestyle education program is the key ingredient needed for success in health promotion at this crisis time in our society.

It is estimated that billions of dollars would be saved by reducing the need to treat heart disease, cancer, stroke, and accidental injuries; bronchitis, dental caries, suicides, homicides, venereal disease and other infectious diseases. Commitment to research and development, experimentation and analysis are required to succeed in this project.

Resolute community leaders and individual participants must join together in support of this multidisciplinary program for the common good. Most can agree to the concepts of self-regulation; that it is possible to control one's own physiology has been revolutionary to those interested in a new order for health care. We have not realized the patient's capacity to participate in his/her own health care. This is an important part of medicine that has been ignored in the past and cannot be ignored in the future.

In summary, it can be seen that this clinical research facility can effectively combine science and humanism and preserve a philosophy which emphasizes the public welfare. Too often, excessive priority is given to the technology involved in the diagnosis of diseases which frequently are not the problem and causes the patient to present himself to a health care system. Excessive focus on disease processes or organ specific approaches can occur when a majority of health providers are not aware, educated, or comfortable with health promotion techniques involving psychotherapy and "therapeutic listening." This only leads to extensive diagnostic procedures that are expensive and do not help the patient with their needs. Health care providers need to develop clinical skills which foster the participation of the patient in a shared responsibility for the outcome of his illness.